

# SOUTHERN ENVIRONMENTAL LAW CENTER

Telephone 434-977-4090

201 WEST MAIN STREET, SUITE 14  
CHARLOTTESVILLE, VA 22902-5065

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Facsimile 434-977-1483

April 8, 2018

Ms. Karen G. Sabasteanski  
Virginia Department of Environmental Quality  
P.O. Box 1105  
Richmond, VA 23218

**RE: Proposed regulations to Reduce and Cap Carbon Dioxide from Fossil Fuel Fired Electric Power Generating Facilities (Revision C17)**

Dear Ms. Sabasteanski:

The Southern Environmental Law Center (“SELC”) is pleased to submit the following comments on the Virginia Department of Environmental Quality (“DEQ”) proposed regulations to “Reduce and Cap Carbon Dioxide (“CO<sub>2</sub>”) from Fossil Fuel Fired Electric Power Generating Facilities.” SELC applauds Governor Northam and his staff for furthering the previous Administration’s proposed carbon dioxide cap and trade program and for demonstrating strong leadership in Virginia. In the absence of any legitimate leadership at the federal level on this issue, it is imperative that the states take action by recognizing carbon emissions for what they are – a global threat that must be met head on at the local level.

Against this backdrop, SELC offers the following comments to help guide and support DEQ as it continues to develop the final regulations.

## **1. Virginia law provides broad legal authority to support the Department of Environmental Quality's Proposed Carbon Regulations.**

DEQ has broad legal authority to promulgate regulations to reduce carbon dioxide pollution through an emissions trading program. Specifically, the Virginia State Air Pollution Control Board ("Air Board" or "the Board") is authorized to regulate air emissions, which includes carbon dioxide.

The Virginia Code, as currently enacted, authorizes the Air Board to "develop a comprehensive program for the . . . abatement and control of all sources of air pollution in the Commonwealth."<sup>1</sup> This power includes the ability to "promulgate regulations . . . abating, controlling and prohibiting air pollution[.]"<sup>2</sup> The law defines "air pollution" as "the presence in the outdoor atmosphere of one of more substances which are or may be harmful or injurious to human health, welfare or safety, to animal or plant life, or to property, or which unreasonably interfere with the enjoyment by the people of life or property."<sup>3</sup> Carbon dioxide clearly qualifies as a "pollutant" subject to Air Board regulation. Indeed, it is well settled on a national level that CO<sub>2</sub> is a pollutant needing regulation. The United States Supreme Court held in *Massachusetts v. EPA* that greenhouse gases, including carbon dioxide, are "without a doubt" pollutants under the Clean Air Act.<sup>4</sup>

Furthermore, the Code *requires* the Board to "make . . . such investigations and inspection and do such other things as are reasonably necessary to carry out the provisions of this chapter . . . including the achievement and maintenance of such levels of air quality as will protect human health, welfare and safety[.]" Following the U.S. Supreme Court's decision in *Massachusetts v. EPA*, and after a careful and extensive review of the scientific record, the federal Environmental Protection Agency determined that greenhouse gas emissions endanger the public health and welfare.<sup>5</sup>

At the state level, carbon pollution is a clear threat to Virginian's health, welfare and safety. Virginia's southern coast faces the highest level of sea level rise on the Atlantic Coast of the United States.<sup>6</sup> Sea level rise is also a threat to public and private property, including the Norfolk Naval Base and the Hampton Roads region, which is becoming increasingly vulnerable to flooding as a result of rising seas.<sup>7</sup> One report, issued by the Virginia Institute of Marine Science, predicts sea level rise will increase in the Hampton Roads area by more than a foot between 2018

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<sup>1</sup> Va. Code. § 10.1-1307(A).

<sup>2</sup> Va. Code. § 10.1-1308(A).

<sup>3</sup> Va. Code. § 10.1-1300.

<sup>4</sup> *Massachusetts v. E.P.A.*, 549 U.S. 497, 529 (2007).

<sup>5</sup> U.S. EPA, Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496 (Dec. 15, 2009).

<sup>6</sup> See Jack Eggleston and Jason Pope, *Land Subsidence and Relative Sea-Level Rise in the Southern Chesapeake Bay Region*, United States Geological Survey, 1, (2013), <https://pubs.usgs.gov/circ/1392/pdf/circ1392.pdf>.

<sup>7</sup> See *The Cost of Doing Nothing: A Sea Level Rise Synopsis for the Hampton Roads Region*, William and Mary Law School VCPC, 1 (Nov. 2016), <https://law.wm.edu/news/stories/2016/documents/Summary%20Costs%20of%20Doing%20Nothing%20and%20Final%20Hampton%20Roads%20SLR%20Report.pdf> (estimating that 0.5 meters of sea level rise annually will cause damages in the Hampton Roads Region to increase annually from roughly \$12 million to roughly \$50 million).

and 2050.<sup>8</sup> Moreover, in Virginia, climate change is exacerbating chronic respiratory diseases, such as asthma.<sup>9</sup> Richmond is already plagued by a high number of asthma rates, leading to its designation by Asthma and Allergy Foundation of America as the number two Asthma Capitol in the U.S. in 2015.<sup>10</sup> Because of the clear danger carbon emissions pose to human health, welfare and safety, it is well within the Air Board's broad legal authority to regulate these harmful pollutants.

Accordingly, we support the Air Board's proposal to link with the Regional Greenhouse Gas Initiative ("RGGI"). Linking to RGGI preserves Virginia's autonomy, while addressing the threat carbon emissions pose to the Commonwealth in a cost-efficient manner.

## **2. The final regulation should cover all electric power facilities that emit carbon dioxide, regardless of fuel type.**

We were glad to see that the proposed regulation covers fossil fuel-fired units, regardless of whether they currently operate or have yet to be constructed. This uniform application prevents a market perversion where power generators could shift generation away from regulated plants to new, unregulated power plants, which would not produce a reduction in statewide carbon emissions. We are also glad to see that the regulations apply to all CO<sub>2</sub> emitted from co-firing units that include at least one fossil fuel-fired unit.

However, the final regulations should include all electric power facilities that emit carbon dioxide, *regardless of fuel type*. Specifically, the regulations should apply to any 25 MW unit that burns biomass.

The science is clear that burning certain biomass, particularly forest-derived biomass, increases net atmospheric CO<sub>2</sub> for 35-100 years or more, compared to fossil fuels. Numerous studies have shown that burning chips or pellets made from standing trees puts more CO<sub>2</sub> in the atmosphere than continuing to burn coal in existing or new power plants. One report, released by the U.K. Department of Energy and Climate Change ("DECC"), showed the use of whole trees from naturally regenerated forest in the U.S. for power production could result in four times the amount of carbon in the atmosphere versus burning coal over a 100-year timeframe.<sup>11</sup> Thus, it is critical that the regulation cover all net carbon emissions.

Straightforward and transparent carbon accounting protocols such as those advocated by the Partnership for Policy Integrity ("PFPI") demonstrate that even under the best case scenario, emissions from wood-burning plants exceed those from fossil fuel-fired plants for periods of one to two decades and beyond. As a result it is most reasonable to include all biomass stack emissions under the cap. However, should DEQ wish to provide some credit to generators who are burning true wastes or residues, the PFPI has offered a straight forward calculator that can be

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<sup>8</sup> See *Sea-Level Report Cards: Trends, projections, and processes to aid coastal planning*, VIMS (March 2018), <http://www.vims.edu/research/products/slrc/index.php>.

<sup>9</sup> *A Human Health Perspective on Climate Change*, NIEHS, 13-15 (April 22, 2010), [https://www.niehs.nih.gov/research/programs/geh/climatechange/health\\_impacts/asthma/index.cfm](https://www.niehs.nih.gov/research/programs/geh/climatechange/health_impacts/asthma/index.cfm).

<sup>10</sup> *2015 Asthma Capitals*, AAFA, [www.aafa.org/media/Asthma-Capitals-Report-2015-Rankings.pdf](http://www.aafa.org/media/Asthma-Capitals-Report-2015-Rankings.pdf).

<sup>11</sup> Anna L. Stephenson and David J. C. MacKay, *Lifecycle Impacts of Biomass Electricity in 2020*, UK DECC (July 2014), <https://www.gov.uk/government/publications/life-cycle-impacts-of-biomass-electricity-in-2020>.

used to find the net emissions over the proposed regulatory time frame.<sup>12</sup> This framework would appropriately weight emissions from industrial facilities burning black liquor as having nearly zero net emissions, as the framework assumes that black liquor would be burned for disposal even if energy recovery does not occur. It would also reflect the net impact of burning wood residues more accurately than the current effective assumption that emissions are zero, when biomass facilities are not covered under the cap.

Any effort to reduce carbon emissions in the Commonwealth must encompass biomass generating facilities. DEQ should amend the draft regulations to include “*any unit combusting carbon-based fuels* that serves an electricity generator with a nameplate capacity equal to or greater than 25 MWe . . . and any sources that includes one or more such units shall be a CO<sub>2</sub> budget sources, subject to the requirements” of the regulations.

### **3. DEQ Should Select a 2020 Starting Baseline That Best Reduces Carbon Emissions.**

SELC supports a 2020 emissions baseline that best achieves DEQ’s goals of reducing statewide carbon pollution. The proposed regulations contain two versions. Of these two, SELC supports “Version 1”—which begins with a 33 million ton base budget and 3 percent reductions annually thereafter—but, as explained below, encourages DEQ to consider actual emissions data from 2019 to determine whether the 2020 cap should be revised down.

Contrary to concerns raised in comments to the Notice of Intended Regulatory Action for Virginia’s proposed Carbon Trading program, compliance with Version 1 is in fact readily achievable. Dominion Energy’s own 2017 Integrated Resource Plan created a Plan Alternative for Clean Power Plan compliance which readily met the Virginia limit of 27,830,174 tons of CO<sub>2</sub> by 2030.<sup>13</sup> Version 1 of the proposed regulations requires 23.10 million ton cap by 2030.

We note, however, that statewide carbon emissions in 2017 were 31.2 million tons, which are actually *lower* than the proposed Version 1 baseline of 33 million tons.<sup>14</sup> We also note that SB966, passed by the Virginia General Assembly in 2018, proposes 5,000 MW of renewable, carbon-free generation and over \$1 billion in energy efficiency investment between now and 2028. With this new landscape, we encourage DEQ to conduct further modeling to predict what 2018 and 2019 emissions are likely to be and recommend that DEQ adopt a starting baseline that is the *lower* of Version 1 or DEQ’s updated forecast for actual 2019 statewide carbon emissions. This allows DEQ to avoid setting a baseline cap that is *higher* than actual emissions in the first compliance year.

A lower initial base budget and more stringent overall cap by 2030 also better achieves the Air Board’s goal of reducing carbon dioxide emissions, growing Virginia’s clean energy economy, and protecting the public health and welfare.

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<sup>12</sup> Mary S. Booth, *Not Carbon Neutral: Assessing the Net Emissions Impact of Residues Burned for Bioenergy* (February 2018), <http://iopscience.iop.org/article/10.1088/1748-9326/aaac88/pdf>.

<sup>13</sup> Virginia Electric and Power Company’s Report of Its Integrated Resource Plan, PUR-2017-00051, at 113 (May 1, 2017), <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwjYr4ejgurZAhWvzlkKHSykCfYQFggpMAA&url=https%3A%2F%2Fwww.dominionenergy.com%2Flibrary%2Fdomcom%2Fmedia%2Fabout-us%2Fmaking-energy%2F2017-irp.pdf%3F%3Den&usg=AOvVaw1Jbutfzq7q7LVpxdobvv2r> (hereinafter “Dominion 2017 IRP”).

<sup>14</sup> *Air Markets Program Data*, U.S. EPA, <https://ampd.epa.gov/ampd/>.

#### **4. Ten year review**

We support the Air Board’s decision to implement a 3.0% per year reduction in carbon emissions over ten years beginning in 2020. This results in a base budget of 23.10 million tons by 2030. While we recognize this is a good initial reduction and sensible ten-year goal, SELC encourages the Board to include a ten year review provision in the final regulations. This ten-year review provision would ensure that Virginia continues to reduce its carbon emissions beyond the initial ten-year goal of the regulations.

To best meet the goals of the CO<sub>2</sub> Budget Trading Program, the final regulations should include a provision for a ten-year review in order to determine emissions reduction goals beyond 2030.

#### **5. 5% set aside or bigger.**

SELC supports the 5% set aside to assist the Virginia Department of Mines Minerals and Energy (DMME) in efforts to abate and control air pollution<sup>15</sup>, although we encourage DEQ to evaluate whether a 10% set aside would produce more benefits than it would increase costs for covered entities. SB966’s commitment to energy efficiency is a notable improvement on the role efficiency will play in Virginia’s energy future, but there can always be better and more diverse initiatives to bring this lowest-cost resource to Virginia. Despite being the lowest-cost energy resource, energy efficiency measures are also among the most labor-intensive, which means that the effect of every dollar spent on efficient has greater economic ramifications than dollars spent on more traditional, supply-side energy resources.

A recent study by Applied Economic Clinic of Virginia’s possible energy efficiency future found that under a “medium efficiency” scenario, total annual electricity sales in Dominion’s territory could actually *decrease*.<sup>16</sup> As Virginia’s in-state generation fleet becomes less carbon intensive as a product of SB966, a decrease in total energy sales only amplifies the possible reduction in statewide carbon emissions. The study also confirmed that a “medium efficiency” scenario could lower customers’ bills by up to 0.3% by 2028. The 5% (or possible 10%) set aside can play a key role in helping Virginians achieve lower carbon pollution *and* lower electricity bills.

#### **6. Cost Management Mechanisms**

The proposed regulations include several important cost management mechanisms, similar to those provided for in the RGGI program. SELC supports the inclusion of these provisions in the proposed regulations.<sup>17</sup> As explained below, these provisions are designed to provide enhanced market flexibility and stability, and have proven to be important mechanisms in establishing a successful cap-and-trade program.

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<sup>15</sup> 9 Va. Admin. Code § 5-140-6210 (B)

<sup>16</sup> Elizabeth A. Stanton, et al., *Missed Opportunities for Efficiency in Virginia*, (Feb. 1, 2018) at 4, fig. 2, <http://consumersunion.org/wp-content/uploads/2018/02/Missed-Opportunities-for-EE-in-VA-Report-Final.pdf>.

<sup>17</sup> As described above, SELC supports “Version 1” with a 33 million ton base budget, including the specific allocations relating to the banking adjustment, cost containment reserve, and emissions containment reserve. *See* 9 Va. Admin. Code § 5-140-6210 (D)-(G).

### a. Banked Allowances

Consistent with the RGGI program, the proposed regulations allow covered entities to bank unlimited CO<sub>2</sub> allowances.<sup>18</sup> SELC supports this provision, so long as it is clear banking can occur for allowances purchased at auction.<sup>19</sup> Banking provides entities with a significant amount of flexibility and has been shown to “encourage sources to reduce their emissions sooner and below required levels.”<sup>20</sup> Banking ensures that all CO<sub>2</sub> reductions have a long-term economic value, and not merely short-term value for immediate compliance purposes.<sup>21</sup> Previous research has shown that by using banking, participants are “very adept at smoothing the supply of allowances over time”—for example, banking allowances in early compliance periods in anticipation of increased allowance scarcity in later periods.<sup>22</sup> Research on other cap-and-trade programs without banking indicates that such programs typically result in “just-in-time” emission reductions, rather than encouraging cost-effective, long-term emissions reductions.<sup>23</sup>

SELC also supports including the budget adjustment for banked allowances.<sup>24</sup> The budget adjustment is necessary due to the high volume of allowances banked during early compliance periods where the volume of RGGI allowances far exceeded actual emissions.<sup>25</sup> Although the RGGI states significantly lowered the regional cap to more closely reflect actual emissions, which took effect in 2014, participants had already banked large numbers of allowances. In 2014, for example, there were an estimated 140 million tons of banked allowances, significantly exceeding that year’s emission cap of 91 million tons.<sup>26</sup> Analysis showed that even with the significant cap reduction in 2014, emission reductions were unlikely to occur without further adjustment to account for the volume of banked allowances.<sup>27</sup>

These adjustments have been in place for several compliance periods, with the third such adjustment period applying to allocation years 2021 through 2025. Virginia sensibly includes this adjustment in its proposed regulations,<sup>28</sup> which should help further the overall goal of reducing CO<sub>2</sub> emissions in an economically efficient manner.<sup>29</sup>

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<sup>18</sup> 9 Va. Admin. Code § 5-140-6270.

<sup>19</sup> This issue is discussed in more detail in Section 8.

<sup>20</sup> Dallas Burtraw, *Design Elements for a Successful CO<sub>2</sub> Trading Program* (Oct. 20, 2006), <https://www.arb.ca.gov/carbis/research/seminars/burtraw/burtraw.pdf>.

<sup>21</sup> Dallas Burtraw, et al., *Quantities with Prices*, Resources for the Future, 22 (Jan. 2018) (working paper), <http://www.rff.org/files/document/file/RFF%20WP%2018-08.pdf>.

<sup>22</sup> Jonathan L. Ramseur, *The Regional Greenhouse Gas Initiative: Lessons Learned and Issues for Congress*, Congressional Research Service, 3 (May 16, 2017), <https://fas.org/sgp/crs/misc/R41836.pdf>; Burtraw, et al., at 22.

<sup>23</sup> Burtraw, *Design Elements*.

<sup>24</sup> 9 Va. Admin. Code § 5-140-6210(F)-(G).

<sup>25</sup> The Regional Greenhouse Gas Initiative, EDF, 2 (May 2013), [https://www.edf.org/sites/default/files/EDF\\_IETA\\_RGGI\\_Case\\_Study\\_May\\_2013\\_0.pdf](https://www.edf.org/sites/default/files/EDF_IETA_RGGI_Case_Study_May_2013_0.pdf); David Farnsworth et al., *Regulatory Assistance Project, RGGI Program Review: A Model to Reduce Uncertainty in State Carbon Plans*, 23 (July 2016), <https://www.raonline.org/wp-content/uploads/2016/09/rap-farnsworth-littell-james-speakesbackman-rggi-program-review-2016-july.pdf>.

<sup>26</sup> Ramseur, at 3; Burtraw, et al., at 8.

<sup>27</sup> Farnsworth et al., at 23.

<sup>28</sup> 9 Va. Admin. Code § 5-140-6210(F)-(G).

<sup>29</sup> 9 Va. Admin. Code § 5-140-6010.

## **b. Cost Containment Reserve**

SELC supports the cost containment reserve allocation included in the proposed regulation,<sup>30</sup> although improvements should be considered in the coming years to ensure that such reserves are only triggered during truly unexpected price spikes.

In the event the allowance price exceeds a specified price (“trigger price”), the cost containment reserve mechanism introduces a limited quantity of additional allowances into the auction to increase the supply and thereby reduce the cost.<sup>31</sup> After being implemented beginning in 2014, the RGGI cost containment reserves have already been triggered twice, once in 2014 and once in 2015, which has raised concerns that the containment mechanism is not functioning as intended. Instead of being reserved for truly extreme and unexpected market spikes, the cost containment reserve trigger prices appeared to have been set too close to anticipated allowance prices, resulting in 15 million reserve allowances being added to the market. Some have argued that these additional allowances were unnecessary, especially given the large quantities of banked allowances.<sup>32</sup> In 2017, after another design review, RGGI implemented several changes to the cost containment reserve mechanism, which should help prevent unnecessary allowances from being released into the market. For example, the cost containment trigger price was initially set at \$4 in 2014 raising to \$10 in 2017, and thereafter escalating by only 2.5 percent each year.<sup>33</sup> Now, the trigger price will be set at \$13.00 in 2021 and increase by 7 percent every year.<sup>34</sup>

Nonetheless, additional changes to the cost containment reserve mechanism should be considered moving forward. Most importantly, the current Virginia proposal, consistent with the RGGI program, provides that every year, additional allowances—up to 10 percent of the emissions cap—can be allocated and sold at auction in the event of a trigger.<sup>35</sup> While this mechanism should help to contain cost, it also effectively increases the overall carbon emissions cap. Virginia, along with other participants in the RGGI auction process, should consider whether additional modifications could better balance carbon emission reduction with cost concerns. For example, it may be more effective to generate cost containment reserves by borrowing allowances against future years or from allowances unsold at auction, rather than generating additional allowances. This sort of program-level borrowing would maintain the overall emissions cap across the initial 10 year program, while still protecting against short-term price spikes.<sup>36</sup>

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<sup>30</sup> See 9 Va. Admin. Code § 5-140-6210(D).

<sup>31</sup> Burtraw, et al., at 2.

<sup>32</sup> See Jackson Morris, *As Climate Warnings Continue, Models Show RGGI Can Do More*, NRDC (June 16, 2016), <https://www.nrdc.org/experts/jackson-morris/climate-warnings-continue-models-show-rggi-can-do-more>.

<sup>33</sup> See Dallas Burtraw, *Resources for the Future, Evaluating Experience with the Cost-Containment Reserve & Ideas for the Future*, Slide 3, (April 29, 2016), [https://www.rrgi.org/sites/default/files/Uploads/Program-Review/4-29-2016/Burtraw\\_on\\_RGGI\\_CCR\\_April\\_29th.pdf](https://www.rrgi.org/sites/default/files/Uploads/Program-Review/4-29-2016/Burtraw_on_RGGI_CCR_April_29th.pdf).

<sup>34</sup> *Summary of RGGI Model Rule Updates*, RGGI, at 2 (Sept. 2017), [https://www.rrgi.org/sites/default/files/Uploads/Program-Review/9-25-2017/Summary\\_Proposed\\_MR\\_Amendments\\_09\\_25\\_17.pdf](https://www.rrgi.org/sites/default/files/Uploads/Program-Review/9-25-2017/Summary_Proposed_MR_Amendments_09_25_17.pdf).

<sup>35</sup> 9 Va. Admin. Code § 5-140-6210(D).

<sup>36</sup> See Burtraw, at Slide 8.

### c. Emissions Containment Reserve

SELC also supports the emissions containment reserve in the proposed regulations,<sup>37</sup> a mechanism recently approved by the RGGI states.

There is inherent price uncertainty in a market-based cap-and-trade program like RGGI due to factors such as natural gas price volatility, variable electricity demand, uncertainties associated with nuclear projects, and other rapidly evolving federal and state renewable energy programs.<sup>38</sup> Where prices are significantly higher than anticipated, the cost containment reserve, described above, is designed to increase supply and reduce cost. Prior to 2017 changes, however, there was not an analogous mechanism if prices were lower than anticipated. Instead, the RGGI program relied only on a reserve price—a minimum acceptable bid.<sup>39</sup>

In 2017, the RGGI program made changes to its model rule to incorporate an emissions containment reserve,<sup>40</sup> changes that Virginia has incorporated into the proposed regulation.<sup>41</sup> In the event allowance prices fall below established triggers, Virginia, like other RGGI states, will withhold up to 10 percent of its allowances from circulation.<sup>42</sup> According to the RGGI model rule, the emissions containment reserve trigger price is set at \$6.00 in 2021 and will rise at 7 percent each year.

This cost management mechanism should help further Virginia’s overall policy goal of reducing carbon emissions in the event that emission reduction costs are lower than projected.<sup>43</sup> Initial modeling of this mechanism indicates that it should further incentivize carbon emission reductions. In situations of low demand and low prices, *i.e.*, situations where the emissions containment reserve is likely to be triggered, a cap-and-trade program is typically not driving emission reductions.<sup>44</sup> Modeling of the emission containment reserve should “better align incentives for individual actors in the region” and make the auction price more responsive to supply.<sup>45</sup>

## 7. SELC supports the proposed method of updating output-based allocations

SELC supports the three-year review, updating output-based allowance allocation method proposed in the regulations. This method of allocating allowances based on a rolling average of emissions over the past three years ensures that where generators do not use the full amount of allowances received over three years, these allowances can be retired or banked, and not hoarded by the generator.

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<sup>37</sup> See 9 Va. Admin. Code § 5-140-6210(E).

<sup>38</sup> Dallas Burtraw, *Resources for the Future, An Emissions Containment Reserve for RGGI: How Might It Work?*, Slide 6 (Feb. 7, 2017), [http://www.rff.org/files/document/file/170207\\_EmissionsContainmentReserveforRGGI.pdf](http://www.rff.org/files/document/file/170207_EmissionsContainmentReserveforRGGI.pdf).

<sup>39</sup> *Id.* at Slide 7.

<sup>40</sup> *RGGI 2016 Program Review: Principles to Accompany Model Rule Amendments*, RGGI, 3 (Dec. 19, 2017), [https://www.rggi.org/sites/default/files/Uploads/Program-Review/12-19-2017/Principles\\_Accompanying\\_Model\\_Rule.pdf](https://www.rggi.org/sites/default/files/Uploads/Program-Review/12-19-2017/Principles_Accompanying_Model_Rule.pdf).

<sup>41</sup> See 9 Va. Admin. Code § 5-140-6210(E).

<sup>42</sup> 9 Va. Admin. Code § 5-140-6210(E).

<sup>43</sup> *Summary of RGGI Model Rule Updates*, 2.

<sup>44</sup> Burtraw, et al., at 28.

<sup>45</sup> *Id.* at 29.



To the extent any parties express concern about “leakage,” *i.e.*, decreased in-state electricity generation in favor of out-of-state generation, which in turn reduces in-state emissions without a corresponding reduction in total emissions, we believe DEQ has adequately addressed that issue with its continually-updating output system. In any event, emissions leakage is not likely to become an issue. Some critics have argued leakage would occur in RGGI states, yet studies have found that these concerns have not materialized. Indeed, RGGI’s most recent Monitoring Report found no evidence of significant leakage.<sup>46</sup>

Moreover, Dominion Energy’s 2017 IRP demonstrated Clean Power Plan compliance was possible without significant increases in purchased power.<sup>47</sup> While Plan C<sup>T</sup> is not an exact match to the proposed carbon trading program, it demonstrates Dominion Energy’s ability to comply with a significant carbon emissions reduction program without resulting in emissions leakage. Thus, while leakage is unlikely to become an issue under the proposed system of emissions reduction, the allocation method used in the proposed regulations should address any concerns raised by those who fear leakage to be a significant issue with cap and trade systems.

**8. The final regulations should include mechanisms to prevent market manipulation to the detriment of customers, including allowance hoarding and windfalls.**

In addition to reducing carbon dioxide emissions and growing Virginia’s clean energy economy, the final regulations should ensure the program is the most economically advantageous system for customers and Virginia families. To ensure this goal is met, SELC urges the Air Board to include in the final regulations a requirement that 100% of allowances make it to the consignment auction and to provide review mechanisms to prevent windfalls for generators. In other words, while we support banking of allowances, we only support banking of allowances that a unit has *purchased* in the market; we do not support banking of allowances received at no cost from DEQ and not submitted to the RGGI auction.

**a. Preventing anti-competitive allowance hoarding.**

Article 9 of the final regulations, *Auction of CO<sub>2</sub> CCR and ECR Allowances*, must make clear that all generators are required to sell *all* allowances back into the consignment auction. Without a full-market participation requirement, a generator could hoard a large share of CO<sub>2</sub> allowances in order to influence prices or prevent competitors from obtaining allowances. To ensure this anti-competitive behavior does not occur, the final regulations must ensure 100% of conditional allowances make it to the consignment auction. While the system appears designed in such a way, additional language could help clarify this important point.

**b. Creating a review mechanism to prevent windfalls for generators.**

Generators initially receive conditional allowances for free, prior to selling into and buying back from the consignment auction. Systems with free allowances have commonly led to windfall

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<sup>46</sup> *CO<sub>2</sub> Emissions from Electricity Generation and Imports in the Regional Greenhouse Gas Initiative: 2014 Monitoring Report*, RGGI, 23 (August 2016), [https://www.rggi.org/sites/default/files/Uploads/Electricity-Monitoring-Reports/2014\\_Elec\\_Monitoring\\_Report.pdf](https://www.rggi.org/sites/default/files/Uploads/Electricity-Monitoring-Reports/2014_Elec_Monitoring_Report.pdf).

<sup>47</sup> Dominion 2017 IRP, Appendix 3G.

profits for generators, to the detriment of customers.<sup>48</sup> However, free allocation systems *can* be done in a way that prioritizes customers. The final regulations should include a review mechanism to prevent these windfalls for generators and ensure that customers benefit.

One means to achieve this is through State Corporation Commission (“SCC”) review of how these windfall profits are used. Indeed there are a number of ways that customers could benefit from allowance profits, whether directly through rate credits, or indirectly through greater emissions reductions, investments in energy efficiency, or other reductions in compliance costs. SELC urges the Air Board to collaborate with the SCC in its review of how generators use windfall profits in order to achieve the greatest level of carbon emissions reduction in the most economically advantageous way for customers. For instance, one possible windfall could occur where a generator sells more allowances in RGGI than it buys back for its own compliance, making it a net seller. In that scenario, the generator is revenue positive as a result of the trading program, but DEQ will have critical information regarding how many allowances that utility received, how many it surrendered in compliance, and what the various market prices were, which DEQ could make public and also provide to the SCC as it reviews utility earnings and expenses in upcoming triennial rate cases and/or annual fuel factor dockets. DEQ should also include in these regulations some failsafe mechanism to ensure that the generator does not profit from the trading program at customer expense as a result of inadequate SCC oversight.

## Conclusion

Carbon emissions and the related threat of climate change are already impacting human health and welfare and public and private property in Virginia. With amendments to the proposed regulations to ensure they encompass all carbon emitting facilities contributing to the problem and amendments to ensure customers also see the economic benefits of the Virginia CO<sub>2</sub> Budget Trading Program, regulations to reduce and cap carbon emissions will become an important and crucial first step in addressing the harmful impacts of carbon emissions in the Commonwealth.

April 8, 2018

Respectfully submitted,



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William C. Cleveland  
SOUTHERN ENVIRONMENTAL LAW CENTER  
201 West Main St., Suite 14  
Charlottesville, VA 22902-5065  
Tel: (434) 977-4090  
Fax (434) 977-1483

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<sup>48</sup> Paul Hibbard and Ellery Berk, *RGGI and Emission Allowance Trading Summer 2017 Update: Options for Voluntary Cooperation among RGGI and Non-RGGI States*, Analysis Group, 7, 24 (July 2017), [http://www.analysisgroup.com/uploadedfiles/content/news\\_and\\_events/news/ag\\_white\\_paper\\_rggi\\_trading\\_july\\_2017.pdf](http://www.analysisgroup.com/uploadedfiles/content/news_and_events/news/ag_white_paper_rggi_trading_july_2017.pdf).